This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1. (original) An apparatus for modeling a transmission behavior of opto-electronic connections in which an electro-optical transmitter having an electrical terminal is connected via an optical conductor to an opto-electrical receiver, comprising:

a transmitter sub-model that models said electro-optical transmitter, comprising an input post representing said electrical terminal, and at least n output posts, where $n \geq 2$, representing optical outputs and emission behavior of said electro-optical transmitter;

a receiver sub-model that models said opto-electrical receiver, having m input posts, where $m \geq 2$, representing optical inputs and reception characteristics of said opto-electrical receiver;

an optical conductor sub-model that models said optical conductor, and which connects said transmitter sub-model to said receiver sub-model, said optical conductor sub-model comprising n posts at an input to which said n output posts of said transmitter sub-model are connected, and said optical conductor sub-model further comprising m posts at an output to which said m input posts of said receiver sub-model are connected;

a component selected from the group consisting of an emission component and a reception component defined by a spatial distribution of optical signals.

2. (original) An apparatus according to claim 1, wherein said emission behavior of the transmitter is acquired by a division into steric light bundles emanating from a beam center, and said reception characteristic is acquired by a tiling of a reception plane.

3. (original) An apparatus according to claim 1, wherein said optical conductor sub-model is acquired by ray tracing.

4. (original) An apparatus according to claim 1, wherein said optical conductor sub-model is determined by measurement.

5. (original) An apparatus according to claim 1, wherein said optical conductor sub-model is calculated by other numerical methods.

6. (original) An apparatus according to claim 1, wherein said transmitter sub-model with respect to the spatial distribution is acquired by measurement with an approximately punctiform sensor that is spatially moved in the emission region.

7. (original) A method for determining the transmission behavior of opto-electronic connections, in which an electro-optical transmitter is connected via an optical conductor to an opto-electrical receiver by measuring or calculating at a purely electrical network, comprising the steps of:

defining spatially quantized an optical signal emitted by said transmitter dependent on a supplied electrical signal into at least two emission components;

determining an electrical signal output by said receiver as a function of optical sensitivity spatially quantized in at least two reception components;

dividing an entry face of said optical conductor facing toward said transmitter into entry sub-faces that correspond to said emission components of said transmitter;

dividing an exit face of said optical conductor facing toward said receiver into exit sub-faces that correspond to said reception components of said receiver;

determining a transfer function of said optical conductor by said entry sub-faces relative to said exit sub-faces; and

inputting said transfer function into either parameter values of an electrical circuit or into a simulator for electrical circuits.

8. (original) A method according to claim 7, wherein said emission components of said transmitter are acquired by a division into steric light beams proceeding from a light beam center, said reception components being acquired by a tiling of a reception plane.

9. (original) A method according to claim 7, wherein said emission components of said transmitter, as a planar radiator, are acquired by a division into light rays emanating from a plurality of source points, said reception components being acquired by a corresponding tiling of a reception plane.

10. (original) A method according to claim 7, wherein said transfer function of said optical conductor is acquired by ray tracing.

11. (original) A method according to claim 7, wherein said transfer function of optical conductor is acquired by measurements.

12. (original) A method according to claim 7, whereby the transfer function of said optical conductor is acquired by arbitrary numerical methods.

13. (original) A method according to claim 7, further comprising the step of acquiring transmitter transfer functions with respect to a spatial distribution of emitted optical power by measurement with an approximately punctiform sensor that is spacially moved in an emission region.

14-15. (cancelled).

16. (original) An apparatus according to claim 1, wherein said receiver sub-model with respect to the spatial distribution is acquired by measurement with an approximately punctiform emitter that is spatially moved in the reception region.

17. (original) A method according to claim 7, further comprising the step of acquiring receiver transfer functions with respect to a spatial distribution of emitted optical power by measurement with an approximately punctiform emitter that is spatially moved in a reception region.